

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**LISTING OF CLAIMS:**

1. (Currently Amended) [[A]] An active spacecraft antenna metal free thermal control film for use in spacecraft comprising a multi-layer interference filter having alternating high and low refractive index layers, said control film adapted to exhibit exhibiting preselected high absorbency and emissive characteristics in the far infrared wavelength range 2.5 $\mu$ m to 50 $\mu$ m, low absorbency characteristics in the solar spectrum range 200-2500nm and high transmissive characteristics in the microwave frequency spectrum 1 to 30GHz.

2. - 3. (Cancelled)

4. (Previously Presented) A thermal control film according to claim 1, wherein the film is in the form of a flexible sheet.

5. (Currently Amended) A thermal control film according to claim 1 wherein the film is ~~in the form of~~ formed by applying a liquid coating ~~to be applied to~~ a surface of the spacecraft.

6. (Previously Presented) A thermal control film according to claim 1 wherein the multi-layer interference filter is a polymeric structure.

7. (Previously Presented) A thermal control film according to claim 1, wherein the multi-layer interference filter comprises one or more layers of any of combination of  $\text{SiO}_2$ ,  $\text{SiO}_x\text{N}_y$ , and  $\text{Si}_3\text{N}_4$ .

8. (Original) A thermal control film according to claim 7, wherein the film is in the form of a plurality of tiles.

9. (Previously Presented) A thermal control film according to claim 1, wherein the thickness of the film is less than 200microns.

10. (Previously Presented) A thermal control film according to claim 1, wherein the thickness of the film is in the range of 50 to 150microns.

11. (Previously Presented) An antenna comprising a thermal control film according to claim 1, covering the active face thereof.

12.-13. (Cancelled)

14. (Previously Presented) A thermal control film according to claim 13 wherein the multi-layer interference filter is a polymeric structure.

15. (Previously Presented) A thermal control film according to claim 14, wherein the multi-layer interference filter comprises one or more layers of any of combination of  $\text{SiO}_2$ ,  $\text{SiO}_x\text{N}_y$ , and  $\text{Si}_3\text{N}_4$ .

16. (Previously Presented) A thermal control film according to claim 15, wherein the film is in the form of a plurality of tiles.

17. (Previously Presented) A thermal control film according to claim 16, wherein the thickness of the film is less than 200microns.

18. (Previously Presented) A thermal control film according to claim 17, wherein the thickness of the film is in the range of 50 to 150microns.

19. (Previously Presented) An antenna comprising a thermal control film according to claim 18, covering the active face thereof.

20. (Previously Presented) A thermal control film according to claim 3, wherein the film is in the form of a flexible sheet.